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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,057	11/25/2003	Sven Bernhard	11884/408001	4191

23838 7590 04/06/2007
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EXAMINER

HOANG, PHUONG N

ART UNIT	PAPER NUMBER
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2194

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/720,057

Applicant(s)

BERNHARD ET AL.

Examiner

Phuong N. Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1 - 20 are pending for examination.
2. This office action is in response to application filed 11/25/03.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 15 – 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The following terms lack proper antecedent basis:

- i. The computer – claims 15 – 18;

- b. The following term is not clearly understood:

- ii. As to claim 1, is it the interface being independent of specific features of the peripheral devices. If so, the claim needs to be clearly claimed that the interface being independent Devices. For examination purpose, examiner treats it as the interface being independent of specific features of the peripheral devices.

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iii. As to claim 6, does the claim recites the peripheral devices include at least one in the group of a printer, a scanner, an imager, a smart card reader, and a barcode reader. For examination purpose, examiner treats it as the peripheral devices include at least one in the group of a printer, a scanner, an imager, a smart card reader, and a barcode reader.

iv. As to claim 12, is it the connection class or peripheral devices that is independent of device-specific features of the peripheral devices. This limitation is similar with limitation in claim 1. It is rejection for the same reason above.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1 – 7, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemon, US patent no.5,379,431.

6. As to claim 1, Lemon teaches a method comprising:

providing an interface (one-size-fits-all interface abstraction, col. 11 lines 34 – 50, col. 5 lines 54 – 63 - col. 7 lines 30) to access a plurality of peripheral devices (peripheral devices, col. 3 lines 15 - 25) independent of specific features of the peripheral devices, the interface having a plurality of generic routines commonly shared by the peripheral devices;

upon receipt of a request (request, col. 10 – 11) , calling the generic routines as a function of specific features of a requested one of the peripheral devices; and

causing a native driver of the requested one of the peripheral devices to execute (device drivers become active, col. 27 lines 18 - 24).

7. As to claim 2, Lemon teaches wherein the providing an interface includes:

providing a plurality of parameters (parameters, col. 23 lines 15 – 30) to define the specific features of the peripheral devices; and providing a plurality of native drivers to control the peripheral devices.

8. **As to claim 3**, Lemon teaches wherein the calling the generic routines includes: determining (col. 23 lines 8 – 34) from the request the specific features of the requested peripheral device; calling the generic routines with the parameters of the requested peripheral device; and using the called routines to access the native driver corresponding to the requested peripheral device.

9. **As to claim 4**, Lemon upon the execution of the driver, accessing the requested peripheral device (col. 17 lines 45 – 50).

10. **As to claim 5**, Lemon teaches upon receipt of another request, using the interface to call the generic routines as a function of specific features of another requested one of the peripheral devices (col. 11 lines 34 – 50, col. 5 lines 54 – 63 - col. 7 lines 30).

11. **As to claim 6**, Lemon wherein the peripheral devices include a printer (printer, col. 3 lines 15 – 25), a scanner, an imager, a smart card reader, and a barcode reader.

12. **As to claim 7**, Lemon teaches wherein the request is a request from an application to connect to the requested peripheral device (col. 10 lines 2 – 10).

13. **As to claim 9**, Lemon teaches wherein the request is a request from the requested peripheral device to connect (inherent when device receive the request, col. 11 lines 20 – 30) to an application to provide the application with data acquired by the requested peripheral device.

14. **Claims 14 – 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Treptow, US pub. no. 2002/0138564.**

15. **As to claim 14**, Treptow teaches a system comprising:

at least one peripheral device (printer, 0005) having associated therewith a native driver (printer driver); and

a mobile computer (laptop) configured to provide an interface (abstract interface) used by an application to access the at least one peripheral device, the interface being independent of device-specific features of the at least one peripheral device.

16. **As to claims 15 - 16**, Treptow teaches wherein the computer is further configured, upon receiving a request (print out, 0005) to use the interface to call a

plurality of routines as a function of the device-specific features of the peripheral device and to cause the native driver, installed on the computer, to execute and control the peripheral device.

17. **As to claim 17**, Treptow teaches wherein the computer is further configured to receive a request from the peripheral device to provide data to the application (the print out, 005).

18. **As to claim 18**, Treptow teaches wherein the computer is further configured, upon receiving a request to access the at least one peripheral device, to use the interface to call a plurality of routines as a function of the device-specific features of the at least one peripheral device, and upon receiving a request to access a second peripheral device (the second of various printers, 0005), to use the interface to call the plurality of routines as a function of the device-specific features of the second peripheral device.

19. **As to claim 19**, Treptow teaches a second mobile computer (PDA, 0005), having the application ported thereto, configured to access a different peripheral device (any printer) with the application, wherein the application on the second mobile computer uses the interface to access the different peripheral device without modifying the application.

20. **As to claim 20**, Treptwo teaches wherein the mobile computer uses the interface to limit communication with the at least one peripheral device to one request at a time (a specific printer, 0005).

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. **Claim 12 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Treptow, US pub. no. 2002/0138564 in view of Lemon, US patent no.5,379,431.**

23. **As to claim 12**, Treptow teaches a method comprising:

generic routines to connect to peripheral devices independent of device-specific features of the peripheral devices (abstract interface of print server, abstract, 0005);

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receiving a request (printer request/event, abstract, 0005, 0008, 0009) to access one of the peripheral devices;

determining whether the requested peripheral device is accessible (determines which one of the three printing will be used, 0077);

if the request is a request to connect a computer to the requested peripheral device (an application Print process for the document, 0069, 0084), cause requested peripheral device to execute.

if the request is a request from the requested peripheral device to send data to the computer (two-way communication between the target printers to the print server, abstract); notifying (notification, 0084) the computer that the requested peripheral device has the data, and sending the data from the requested peripheral device to the computer (finished printing).

Treptow does not explicitly teach the application is implemented in object oriented programming.

Lemon teaches the abstract interface for connecting peripheral devices (col. 11 lines 34 – 50, col. 5 lines 54 – 63 - col. 7 lines 30), that providing a connection class (class, col. 4, col. 5 lines 54 – 63 - col. 7 lines 30, col. 11 lines 34 – 50); instantiating the connection class to create an object (object is an instance of the class, col. 4) specific to the requested peripheral device, and connecting, through the driver (device driver, col. 17 lines 40 – 50), the computer to the requested peripheral device.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Treptow and Lemon's system because the software program would be easily re-used and supports multi-platform operating system (col. 1 lines 20 – 45).

24. **As to claim 13**, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that disconnecting the computer from the requested peripheral device when there is no printing request needed.

25. **Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lemon, US patent no. 5,379,431.**

26. **As to claim 8**, Lemon does not teach wherein the request is a request from an application to disconnect from the requested peripheral device.

it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that disconnecting the computer from the requested peripheral device when the request does not need

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27. Claim 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Lemon, US patent no.5,379,431 in view of Dorris, US patent no. 5,867,710.

28. As to claim 10, Dorris teaches providing an emulator to simulate access to the peripheral devices in order to test the interface (HAL test, title, abstract, col. 1, figures 3 and 4 and associated text).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Lemon and Dorris's system because the test would make sure the devices would properly operate with the interface (col. 2 lines 20 – 35).

29. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lemon, US patent no.5,379,431 in view of Treptow, US pub. no. 2002/0138564.

30. As to claim 11, Treptow teaches providing a graphical user display (figure 2 and associated text) to allow a user to select the peripheral devices to be accessible by the interface; and providing native drivers corresponding to the selected peripheral devices.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Lemon and Treptow's system because graphic user display would show users which peripheral devices accessible.

Conclusion

31. The prior art made of record but not relied upon request is considered to be pertinent to applicant disclosure.

- Chen, US patent no. 6,526,523, demonstrating a system for testing generic interface software used in input devices.
- Slaughter, US patent no. 6,434,694, demonstrating a platform independent device drivers.

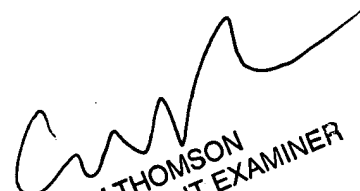
32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ph
March 20, 2007


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SUPERVISORY PATENT EXAMINER